

Figure 1,  
Prior Art

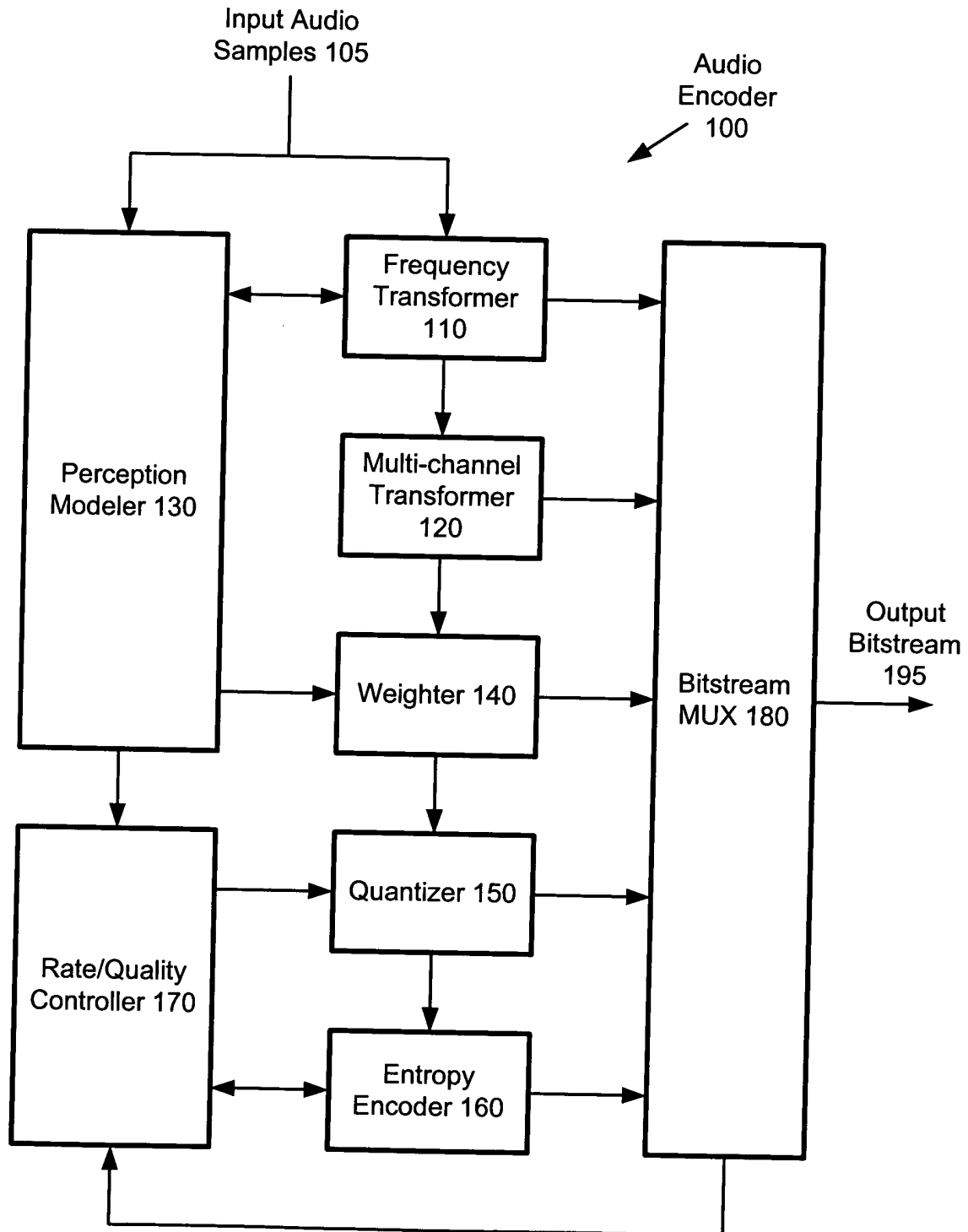


Figure 2,  
Prior Art

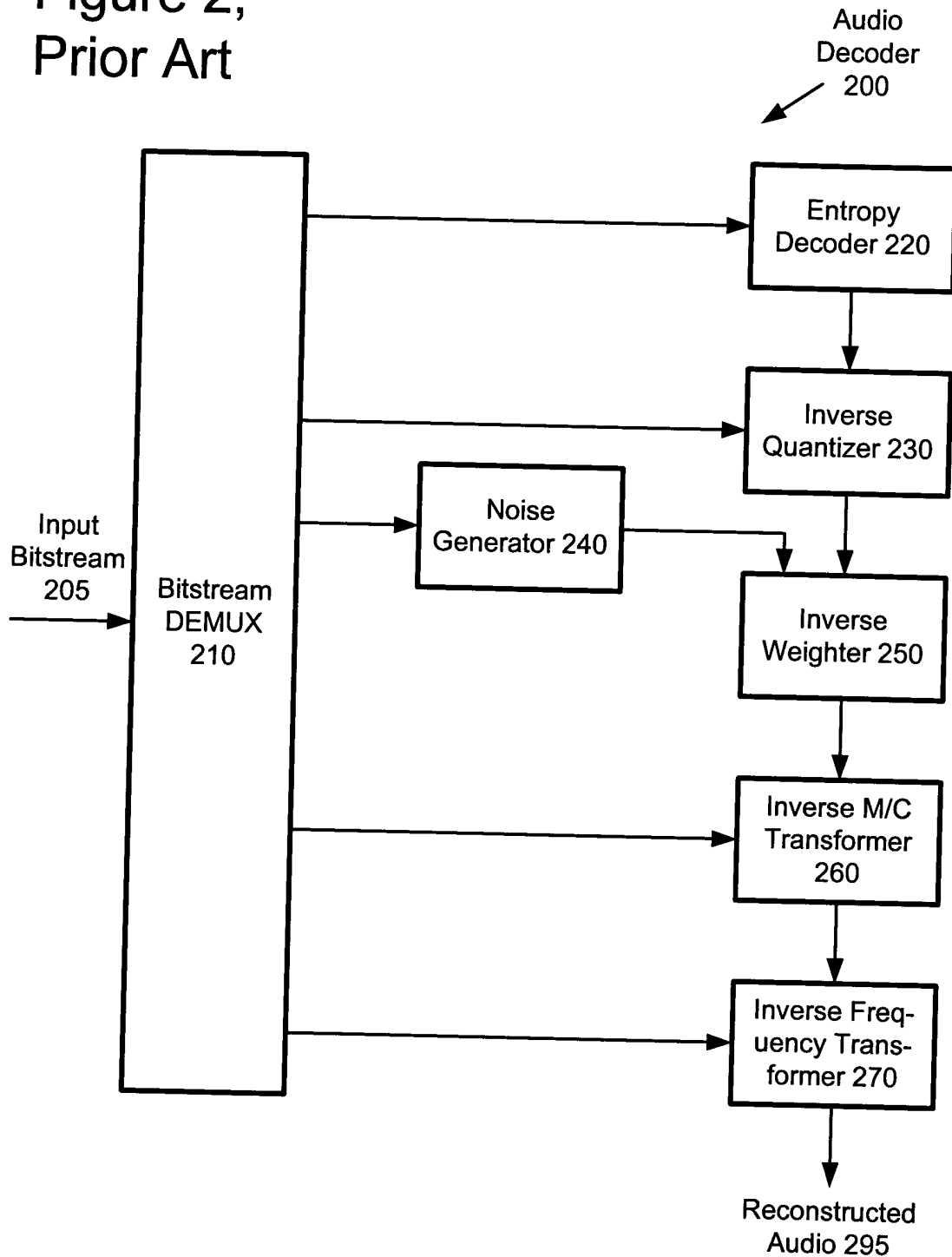


Figure 3a, Prior Art

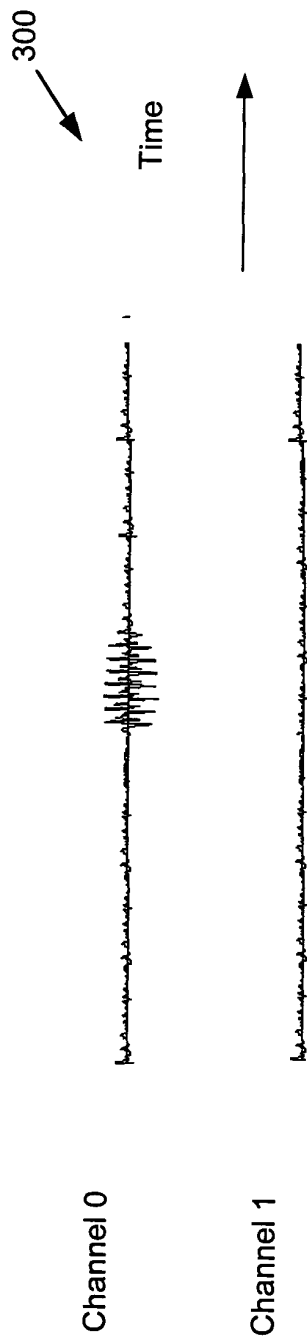


Figure 3b, Prior Art

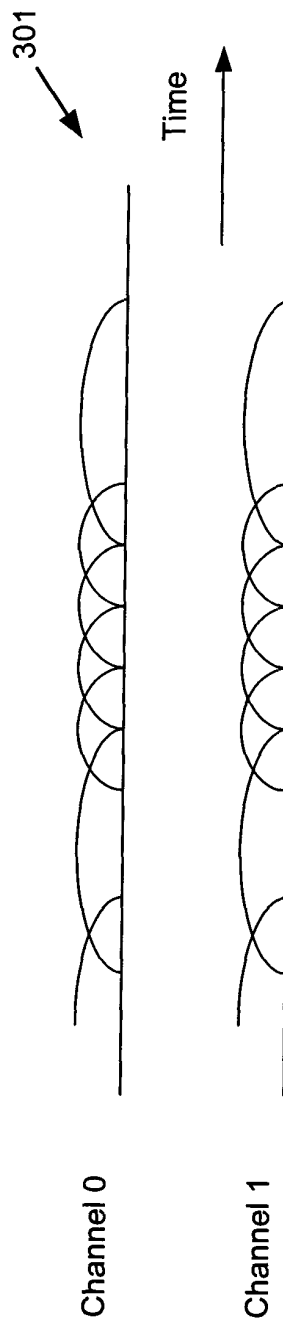


Figure 3c, Prior Art

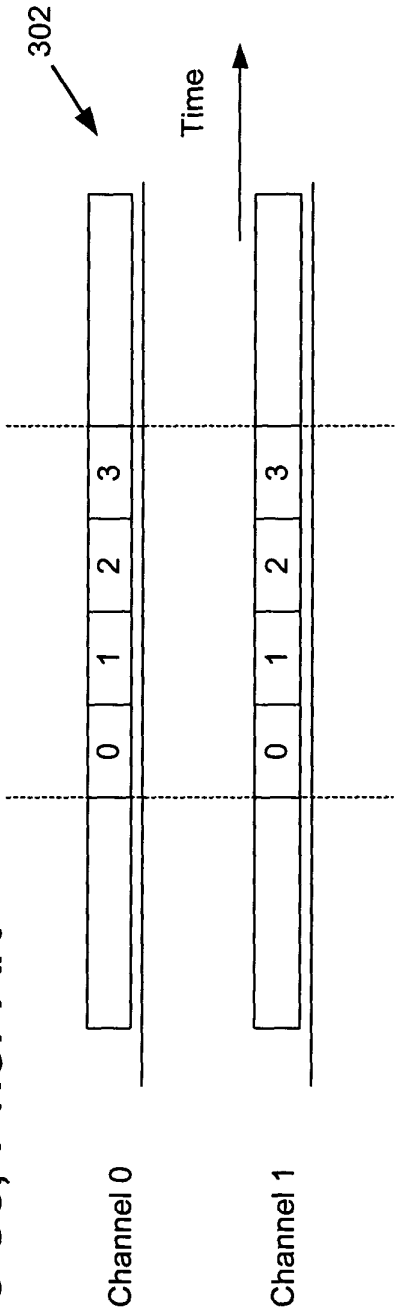


Figure 11a

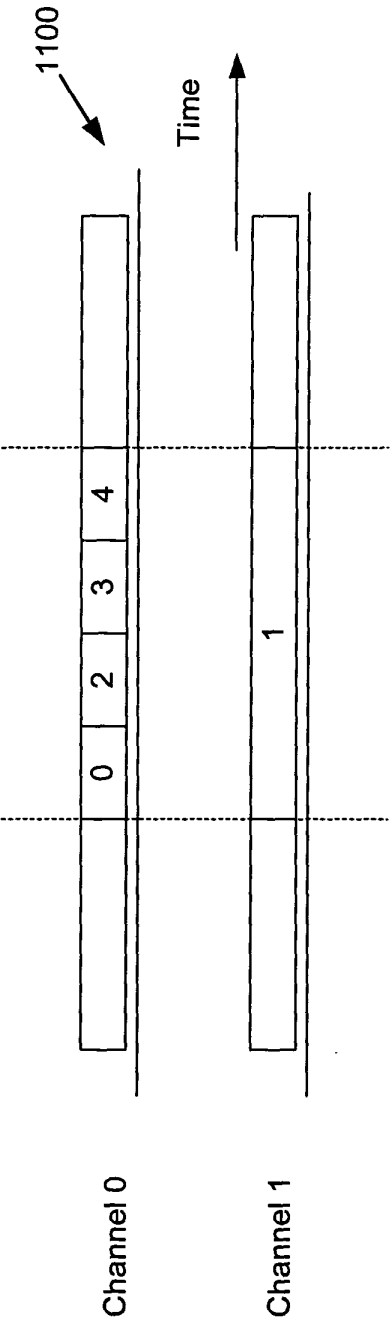


Figure 4

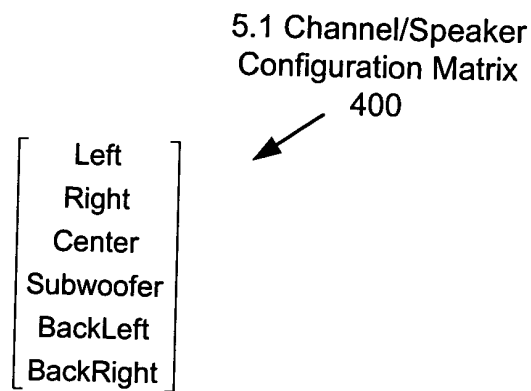


Figure 5

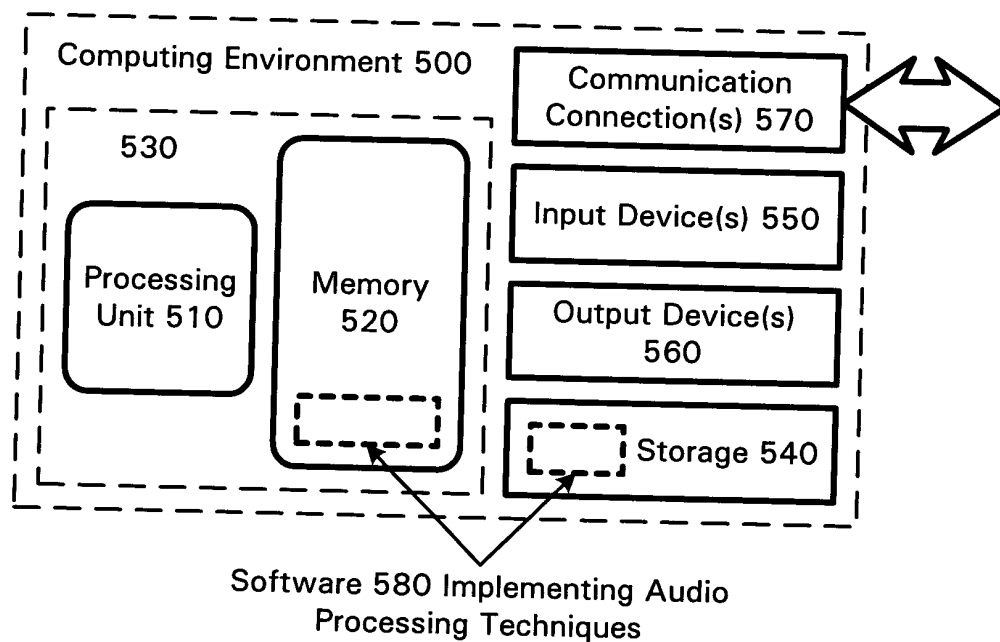


Figure 6

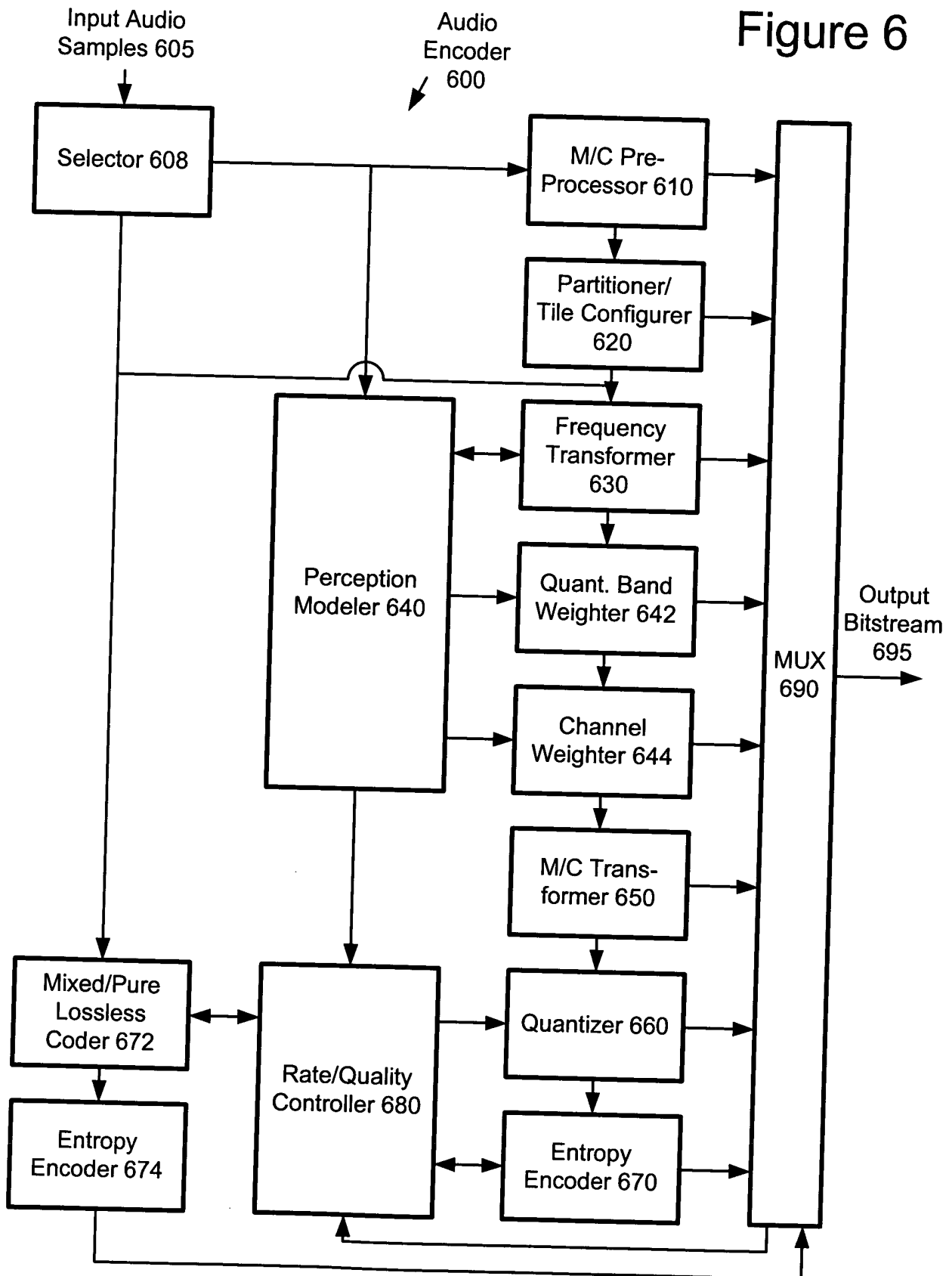


Figure 7

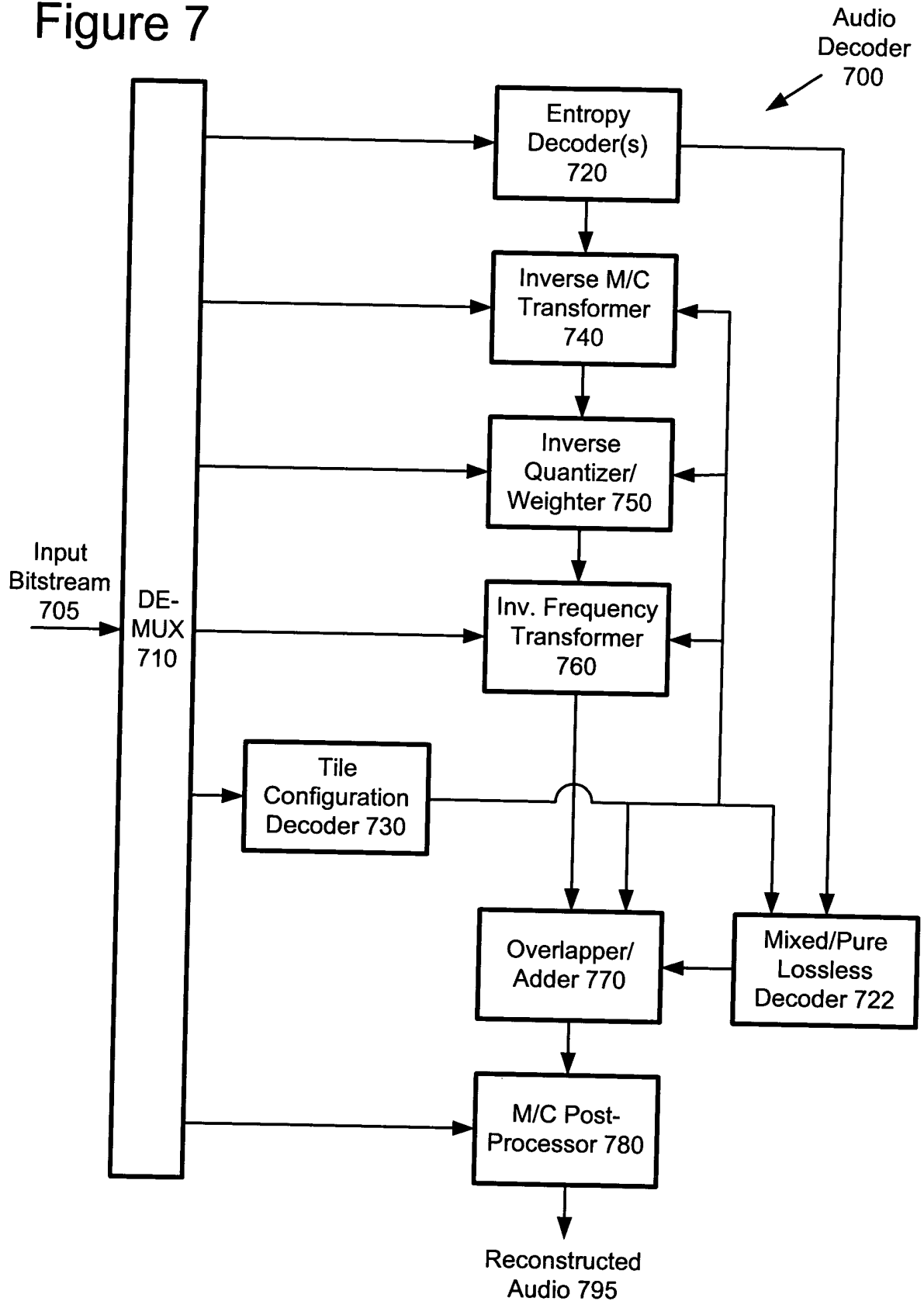


Figure 8

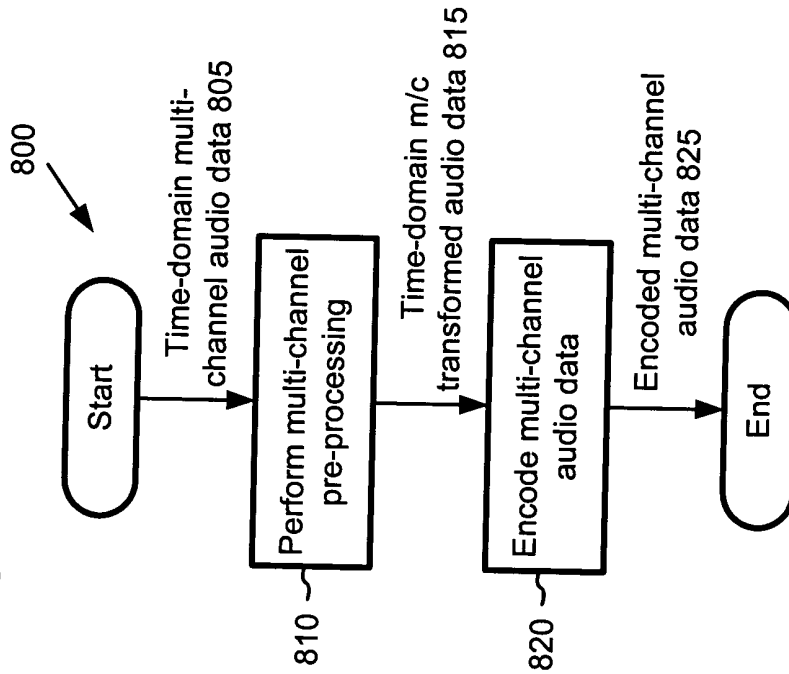


Figure 10

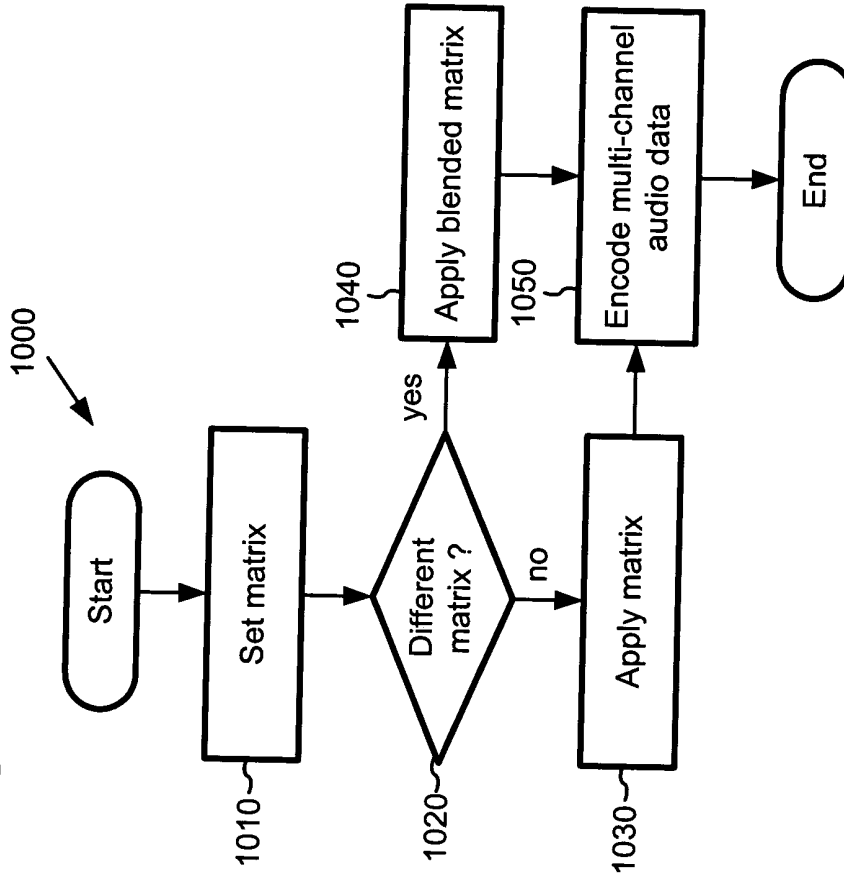




Figure 9a

$$A_{\text{low}} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix}$$

Good quality  
pre-processing  
transform matrix  
900

Figure 9b

$$A_{\text{inter},1} = \begin{bmatrix} \left( \frac{1}{1+0.5 \cdot \alpha} \right) & 0 & \left( \frac{0.5 \cdot \alpha}{1+0.5 \cdot \alpha} \right) & 0 & 0 & 0 \\ 0 & \left( \frac{1}{1+0.5 \cdot \alpha} \right) & \left( \frac{0.5 \cdot \alpha}{1+0.5 \cdot \alpha} \right) & 0 & 0 & 0 \\ \left( \frac{\alpha}{1+2\alpha} \right) & \left( \frac{\alpha}{1+2\alpha} \right) & \left( \frac{1}{1+2\alpha} \right) & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & \left( \frac{1}{1+\alpha} \right) & \left( \frac{\alpha}{1+\alpha} \right) \\ 0 & 0 & 0 & 0 & \left( \frac{\alpha}{1+\alpha} \right) & \left( \frac{1}{1+\alpha} \right) \end{bmatrix}$$

First  
intermediate  
quality pre-  
processing  
transform matrix  
901

Figure 9c

$$A_{\text{high},1} = \begin{bmatrix} \left( \frac{1}{1.5} \right) & 0 & \left( \frac{0.5}{1.5} \right) & 0 & 0 & 0 \\ 0 & \left( \frac{1}{1.5} \right) & \left( \frac{0.5}{1.5} \right) & 0 & 0 & 0 \\ \left( \frac{1}{3} \right) & \left( \frac{1}{3} \right) & \left( \frac{1}{3} \right) & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0.5 & 0.5 \\ 0 & 0 & 0 & 0 & 0.5 & 0.5 \end{bmatrix}$$

First poor quality  
pre-processing  
transform matrix  
902

Figure 9d

Second  
intermediate  
quality pre-  
processing  
transform matrix  
903

$$A_{\text{inter},2} = \begin{bmatrix} \left( \frac{1}{1+0.5 \cdot \alpha} \right) & 0 & \left( \frac{0.5 \cdot \alpha}{1+0.5 \cdot \alpha} \right) & 0 & 0 & 0 \\ 0 & \left( \frac{1}{1+0.5 \cdot \alpha} \right) & \left( \frac{0.5 \cdot \alpha}{1+0.5 \cdot \alpha} \right) & 0 & 0 & 0 \\ 0.5 \cdot \alpha & 0.5 \cdot \alpha & 1-\alpha & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & \left( \frac{1}{1+\alpha} \right) & \left( \frac{\alpha}{1+\alpha} \right) \\ 0 & 0 & 0 & 0 & \left( \frac{\alpha}{1+\alpha} \right) & \left( \frac{1}{1+\alpha} \right) \end{bmatrix}$$

Figure 9e

Second poor  
quality pre-  
processing  
transform matrix  
904

$$A_{\text{high},2} = \begin{bmatrix} \left( \frac{1}{1.5} \right) & 0 & \left( \frac{0.5}{1.5} \right) & 0 & 0 & 0 \\ 0 & \left( \frac{1}{1.5} \right) & \left( \frac{0.5}{1.5} \right) & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0.5 & 0.5 \\ 0 & 0 & 0 & 0 & 0.5 & 0.5 \end{bmatrix}$$

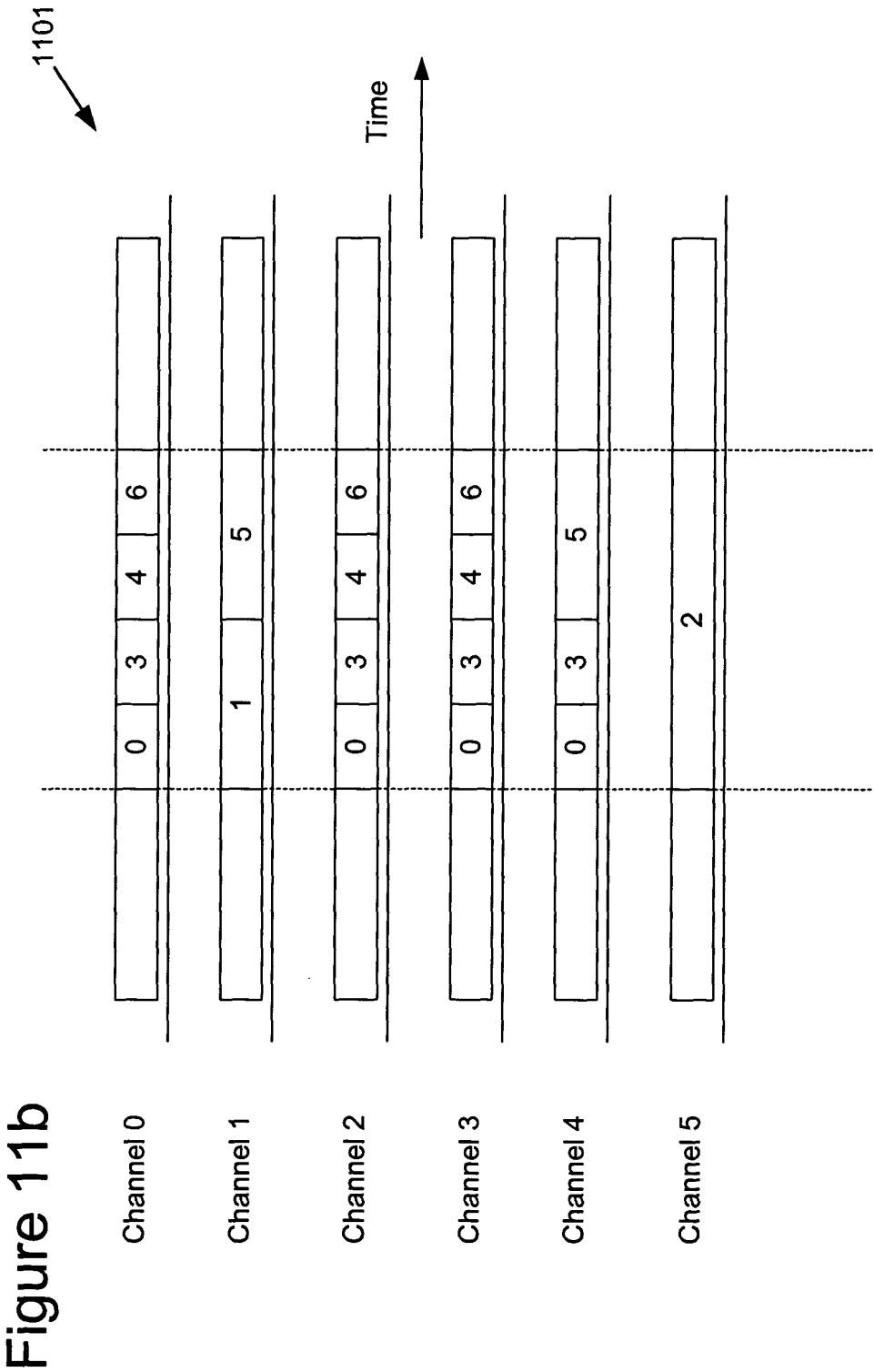


Figure 15 1500

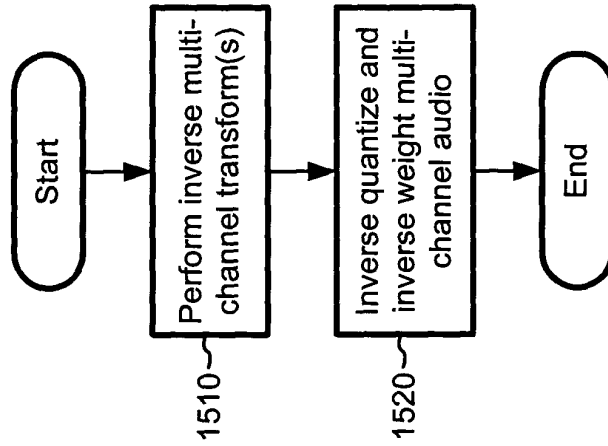


Figure 14 1400

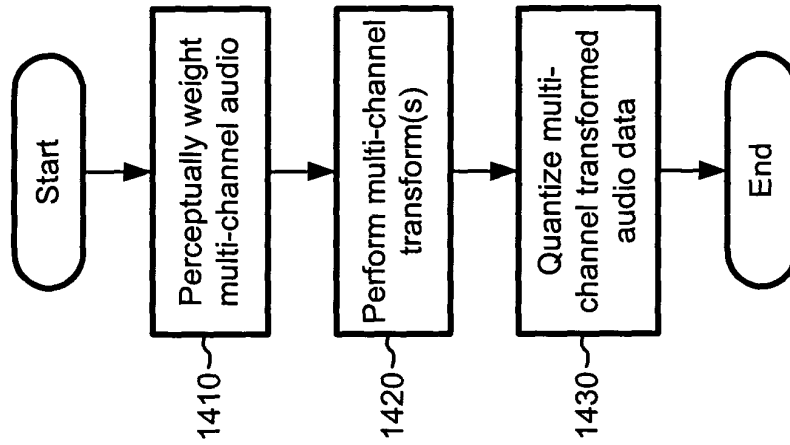


Figure 12 1200

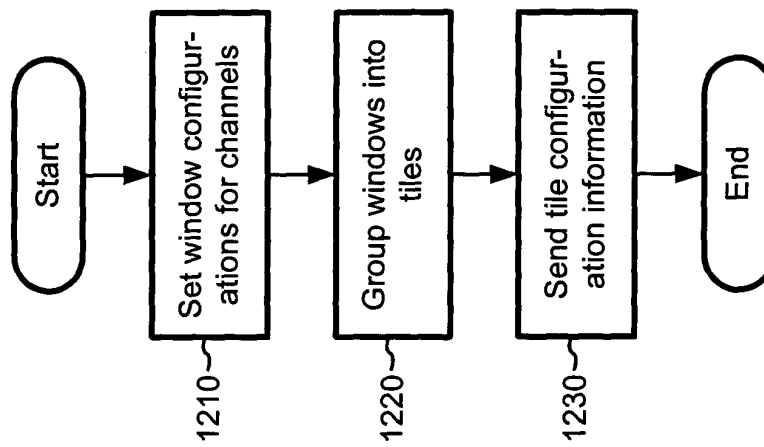


Figure 13

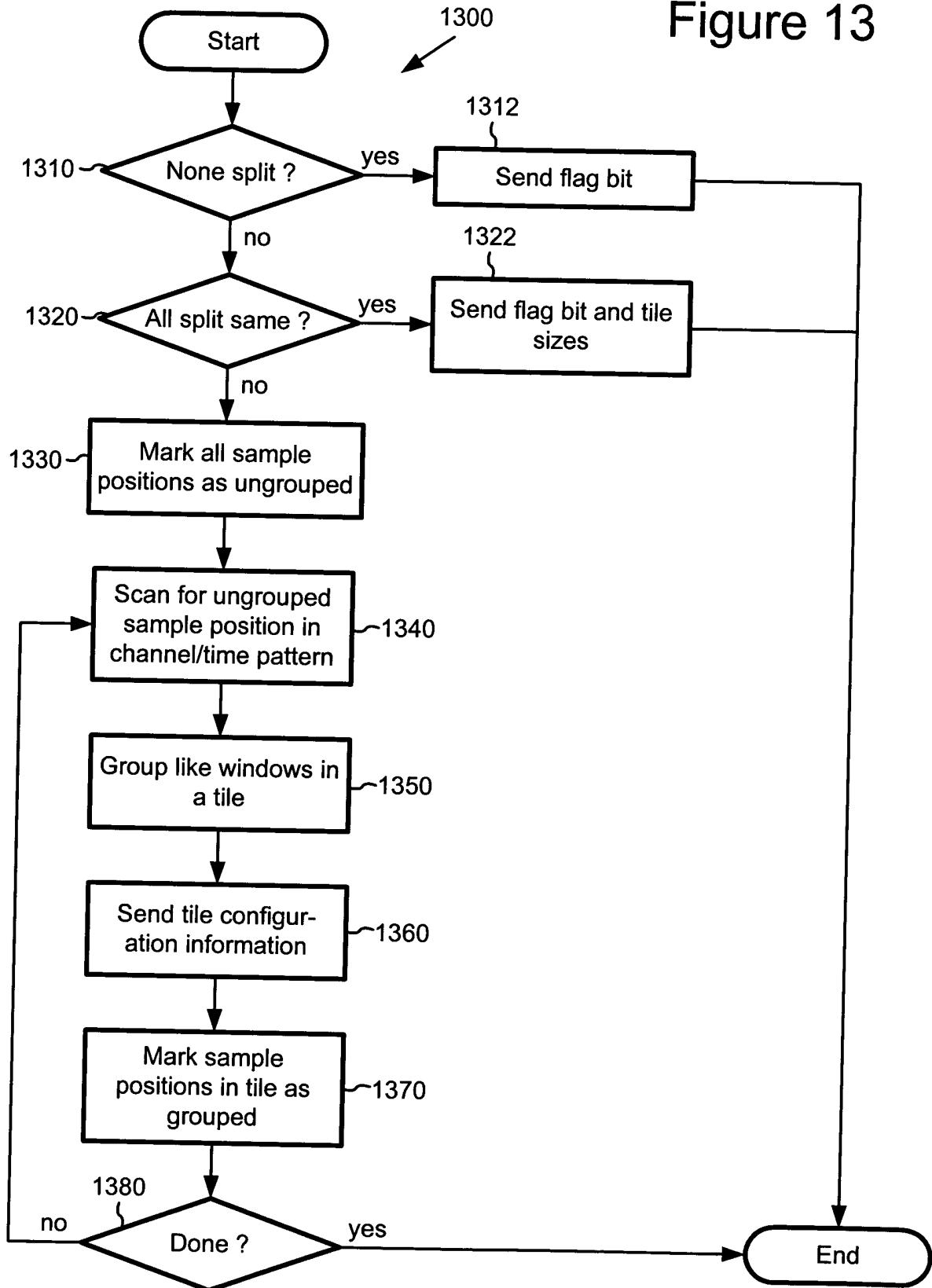


Figure 16

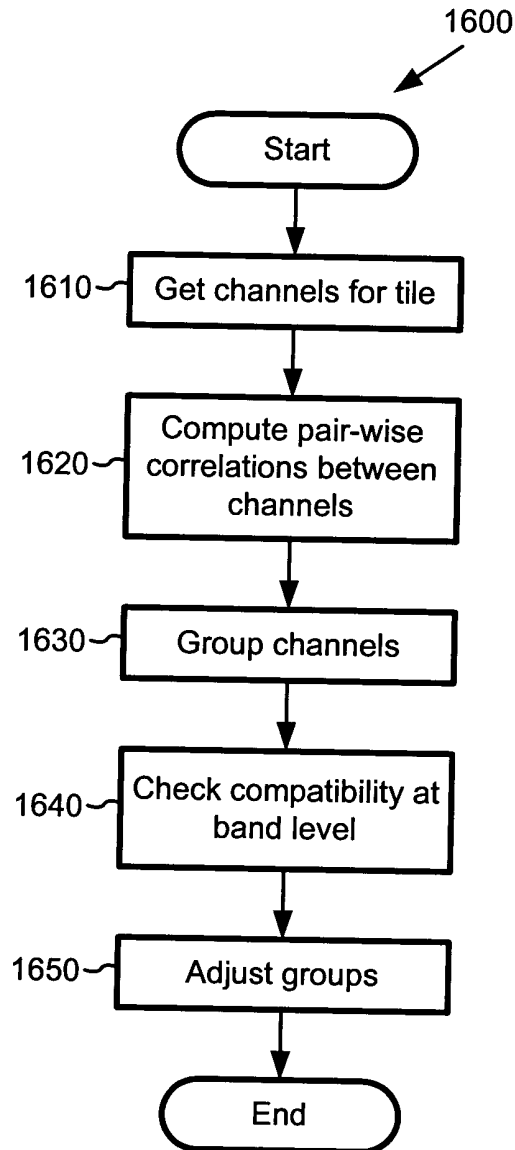


Figure 17

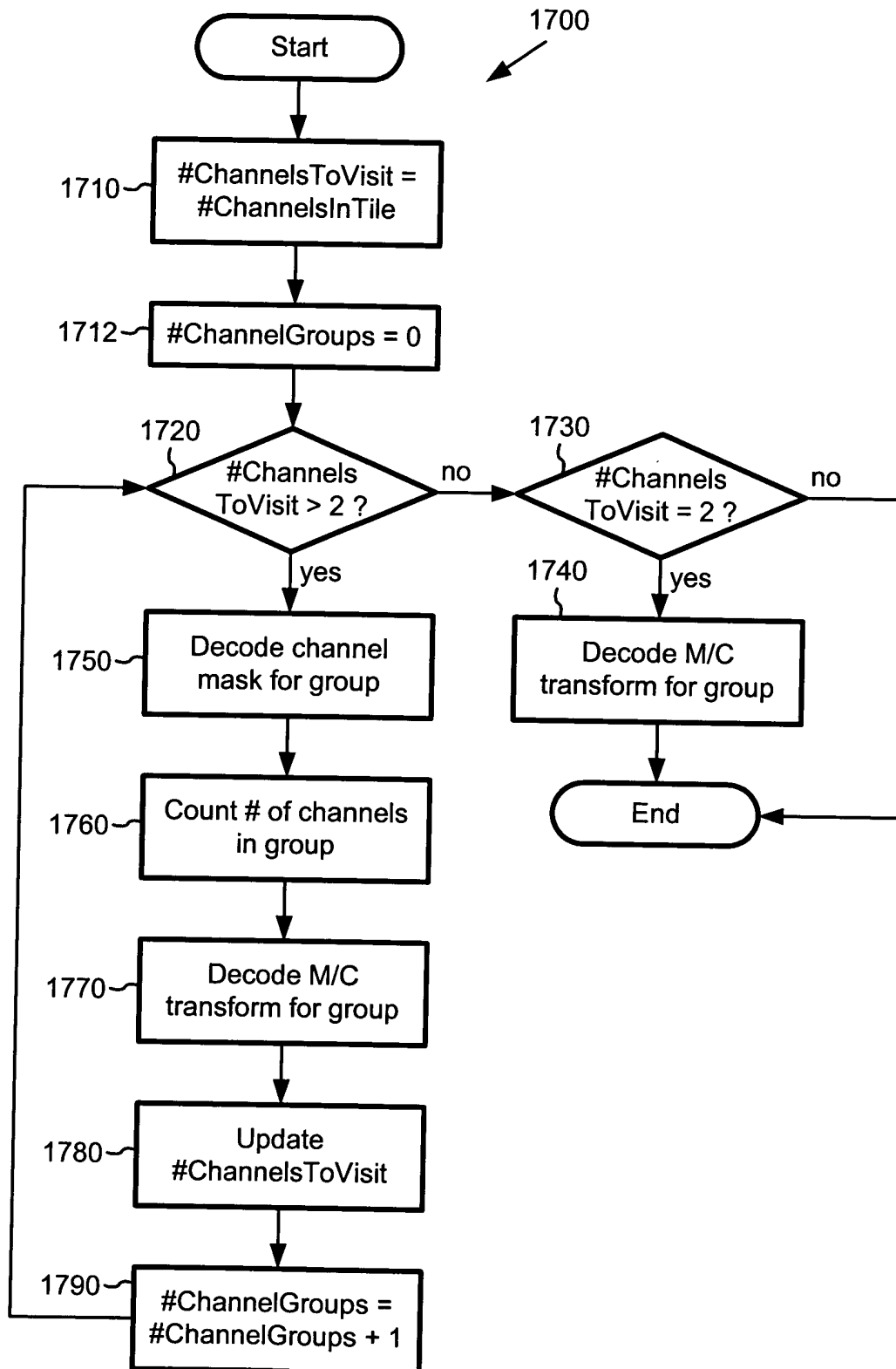


Figure 18

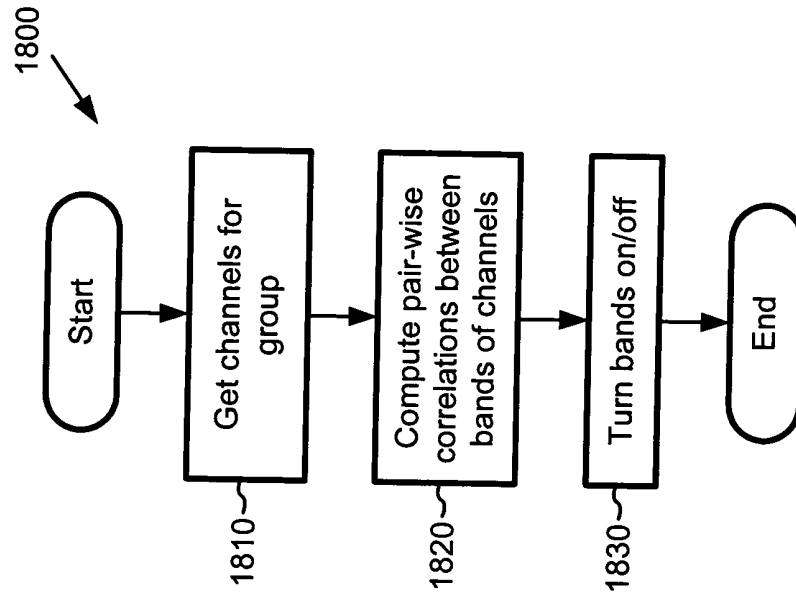


Figure 19

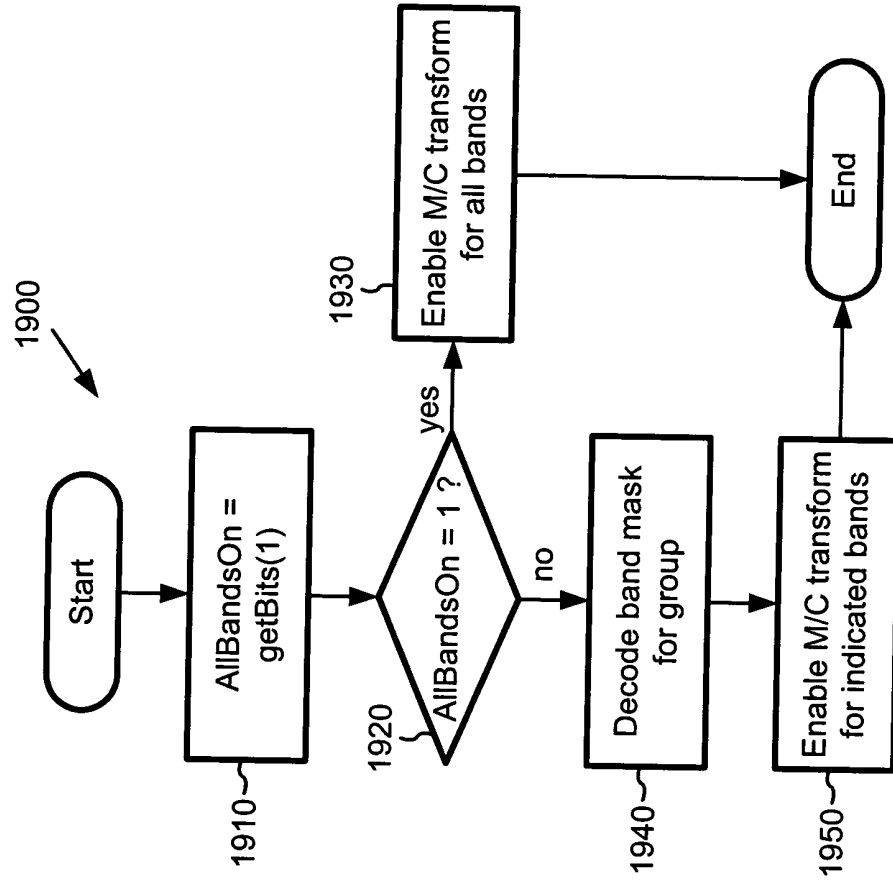




Figure 20

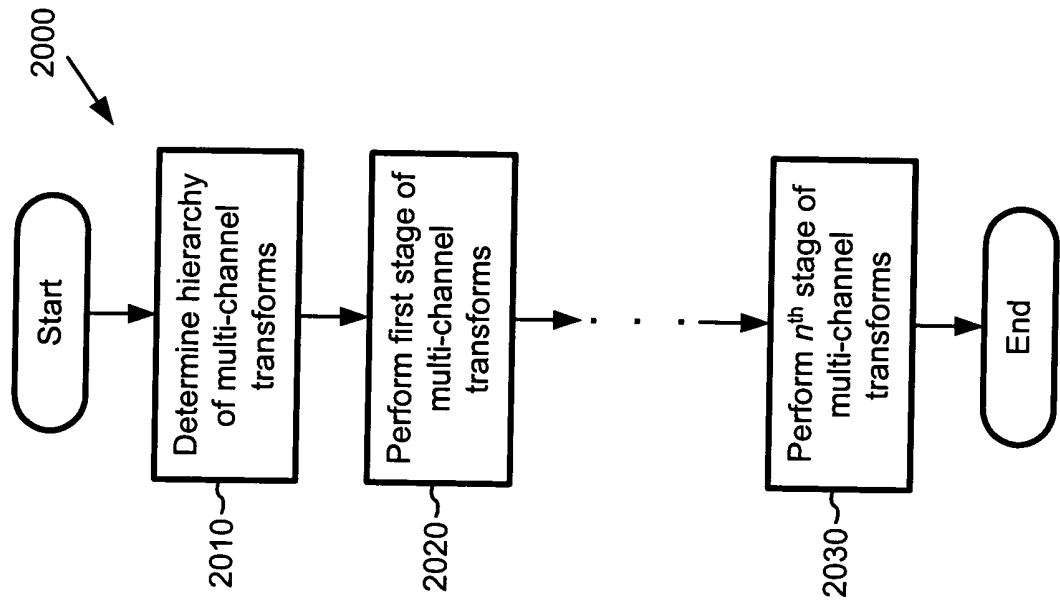


Figure 22

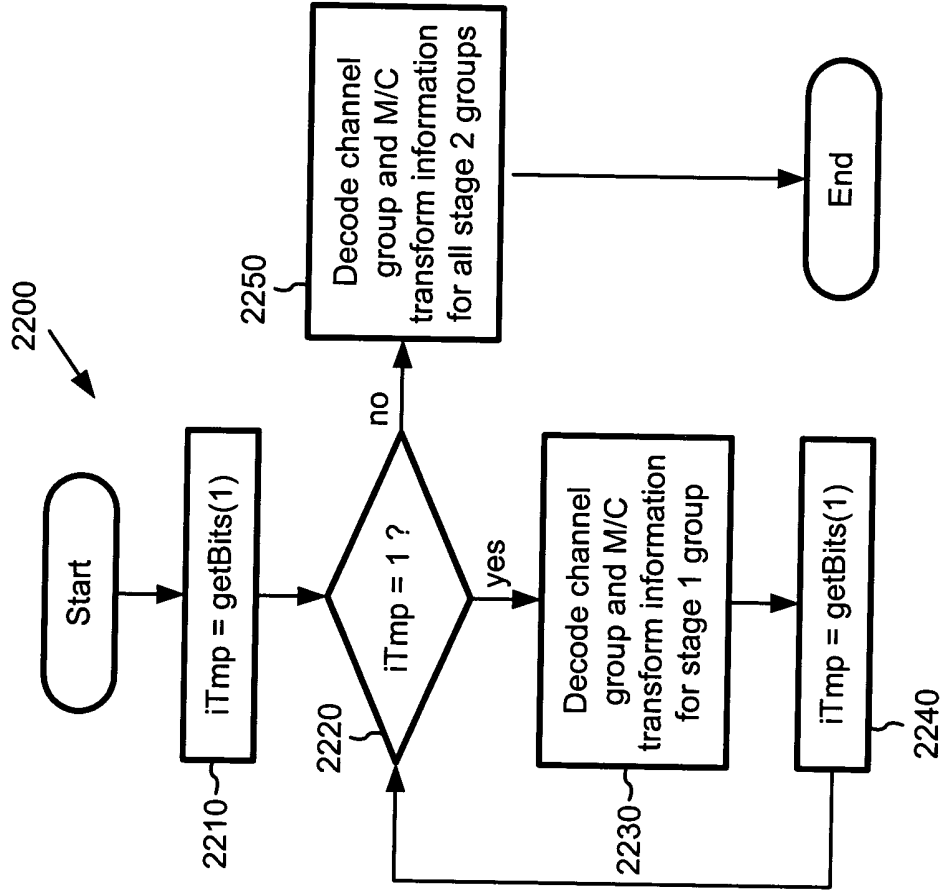


Figure 21

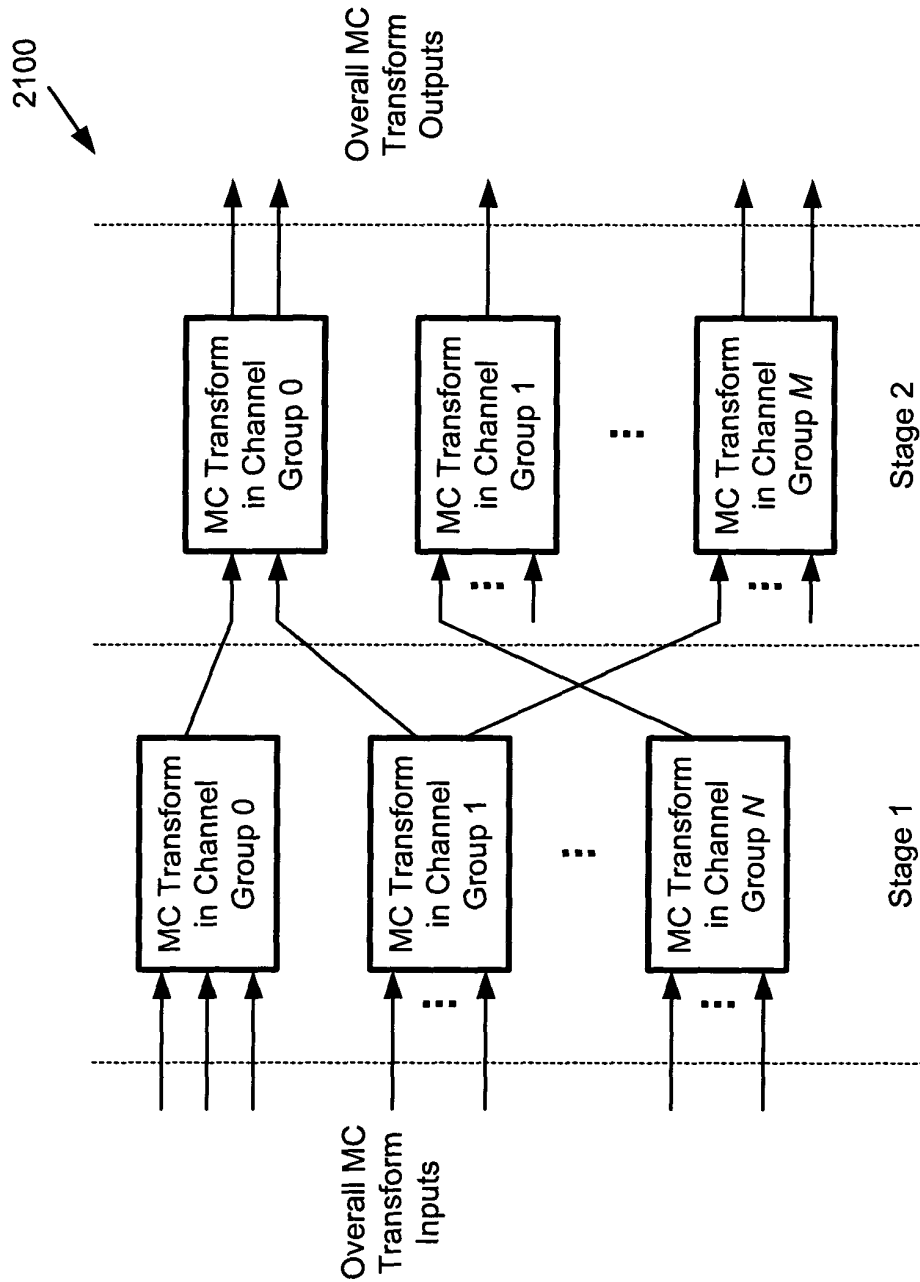


Figure 23

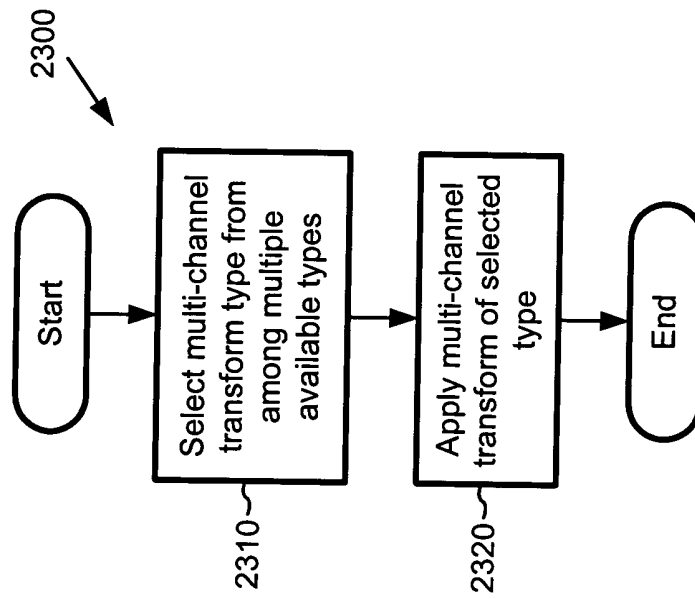


Figure 24

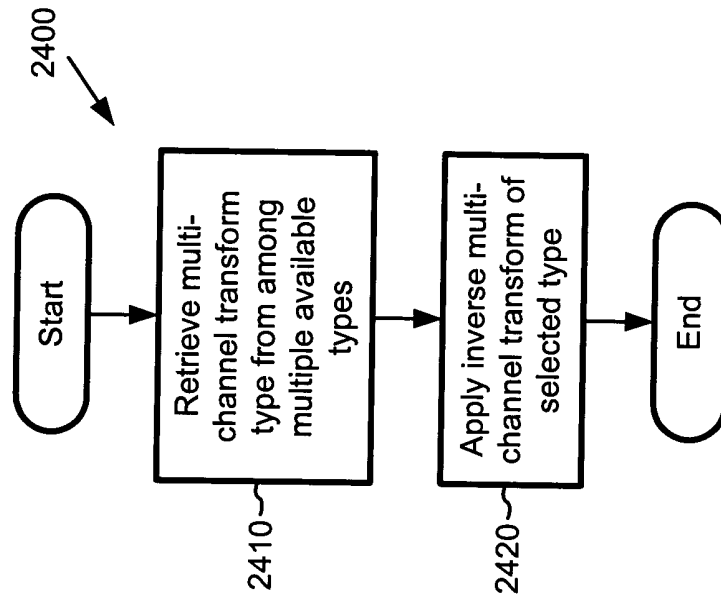


Figure 25

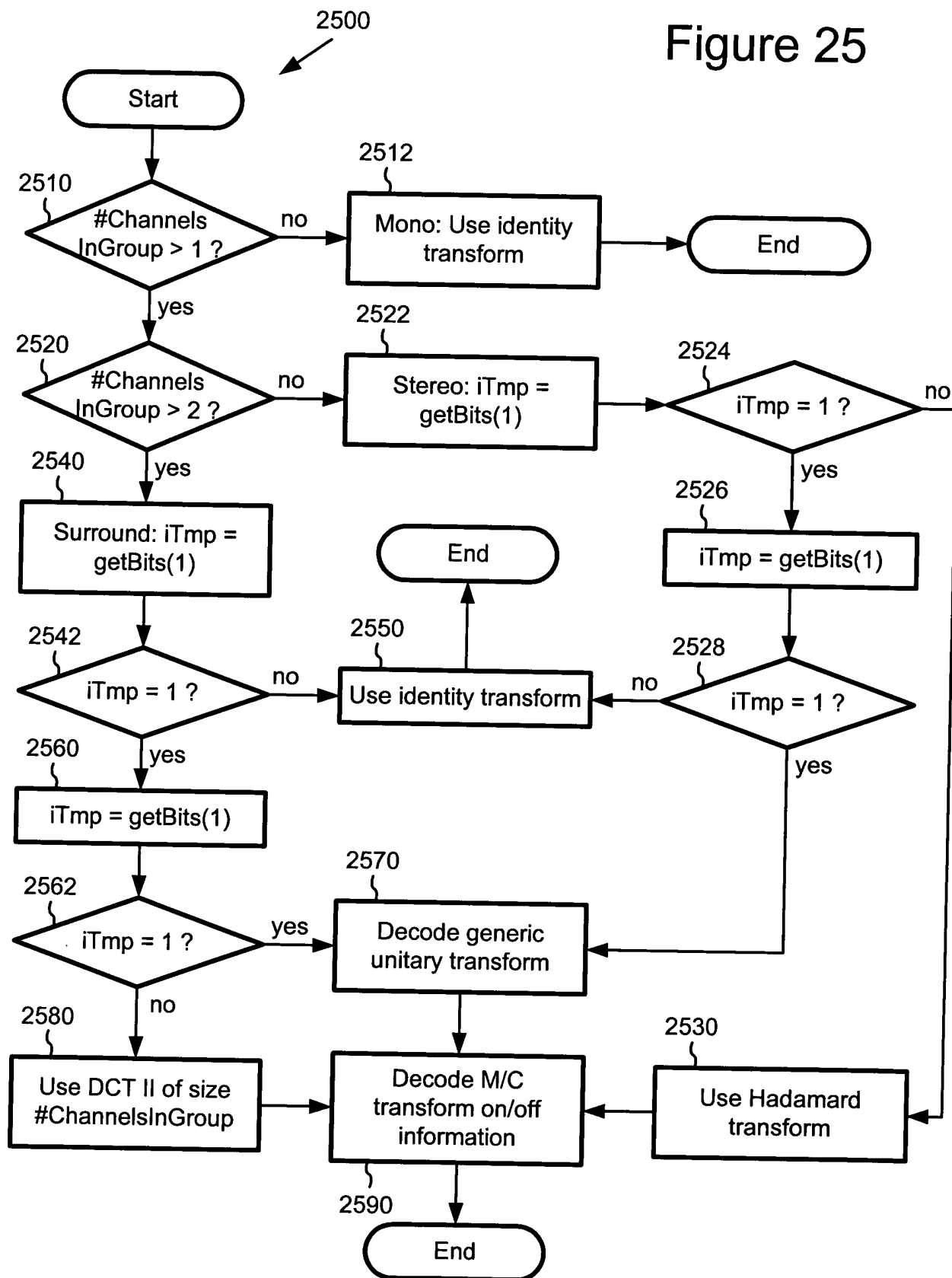


Figure 28

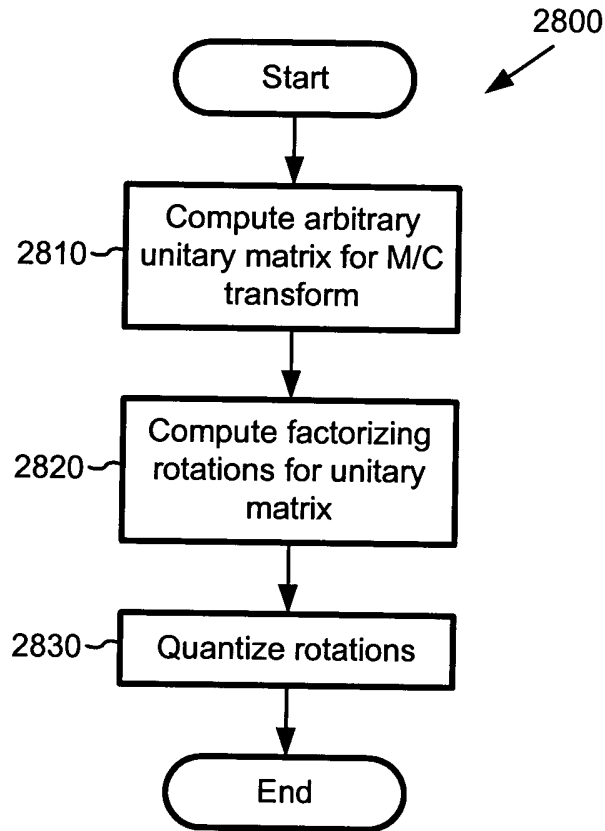


Figure 26

2600

$$\begin{bmatrix}
 1 & 0 & 0 & 0 & \dots & 0 & 0 & 0 & 0 \\
 0 & 1 & 0 & 0 & \dots & 0 & 0 & 0 & 0 \\
 0 & 0 & \cos \omega_k & 0 & \dots & \sin \omega_k & 0 & 0 & 0 \\
 0 & 0 & 0 & 1 & \dots & 0 & 0 & 0 & 0 \\
 \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots \\
 0 & 0 & -\sin \omega_k & 0 & \dots & \cos \omega_k & 0 & 0 & 0 \\
 0 & 0 & 0 & 0 & \dots & 0 & 1 & 0 & 0 \\
 0 & 0 & 0 & 0 & \dots & 0 & 0 & 1 & 0 \\
 0 & 0 & 0 & 0 & \dots & 0 & 0 & 0 & 1
 \end{bmatrix}$$

Figure 27a

$$\Theta_1 = \begin{bmatrix} \cos \varpi_1 & \sin \varpi_1 & 0 & 0 & 0 & 0 & 0 & \dots & 0 \\ -\sin \varpi_1 & \cos \varpi_1 & 0 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & \dots & 0 \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & \dots & 1 \end{bmatrix} \quad \swarrow 2700$$

Figure 27b

$$\Theta_2 = \begin{bmatrix} \cos \varpi_2 & 0 & \sin \varpi_2 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 & \dots & 0 \\ -\sin \varpi_2 & 0 & \cos \varpi_2 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & \dots & 0 \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & \dots & 1 \end{bmatrix} \quad \swarrow 2701$$

Figure 27c

$$\Theta_3 = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & \cos \varpi_3 & \sin \varpi_3 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & -\sin \varpi_3 & \cos \varpi_3 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & \dots & 0 \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & \dots & 1 \end{bmatrix} \quad \swarrow 2702$$

Figure 29

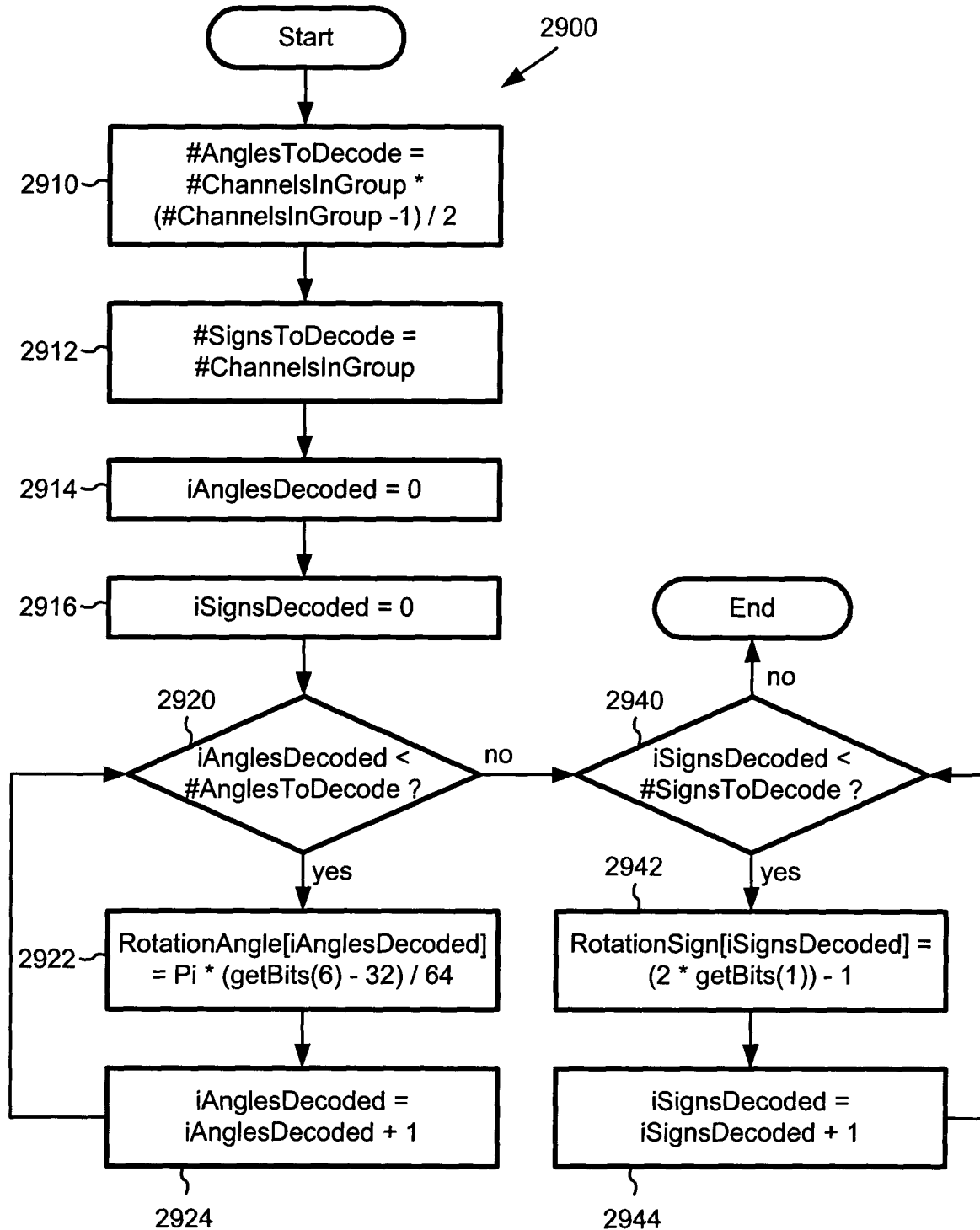


Figure 30

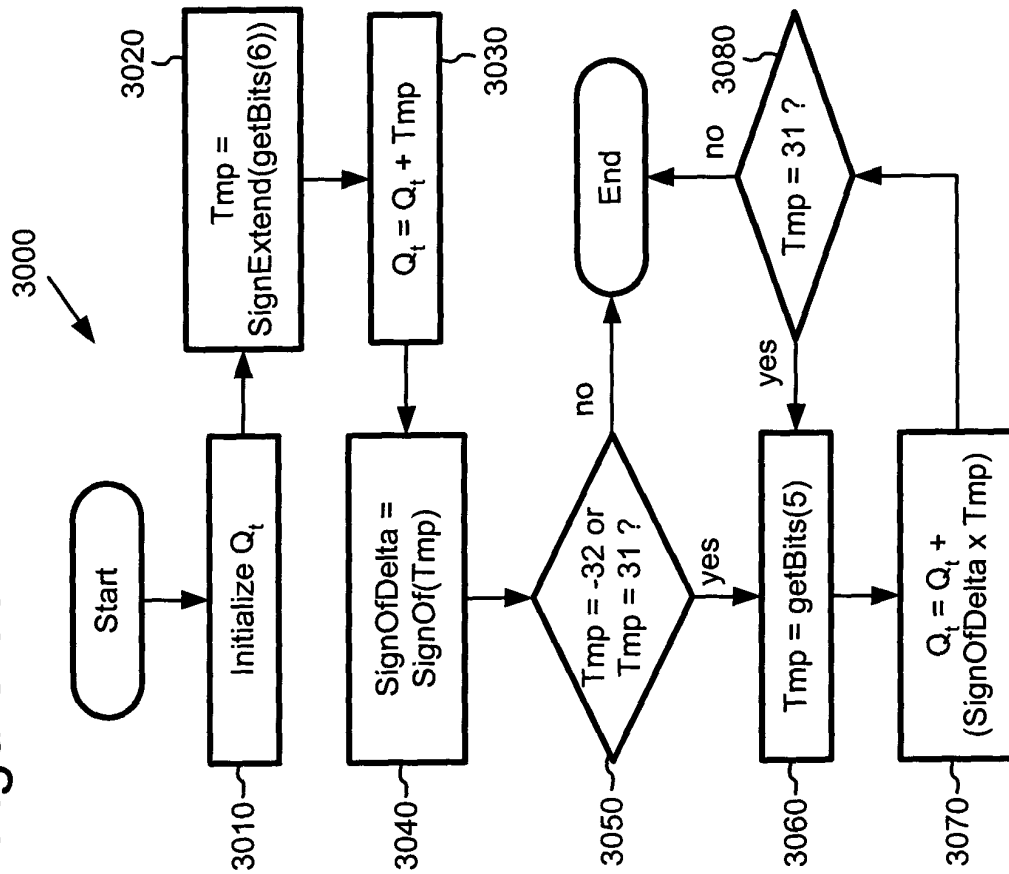


Figure 31

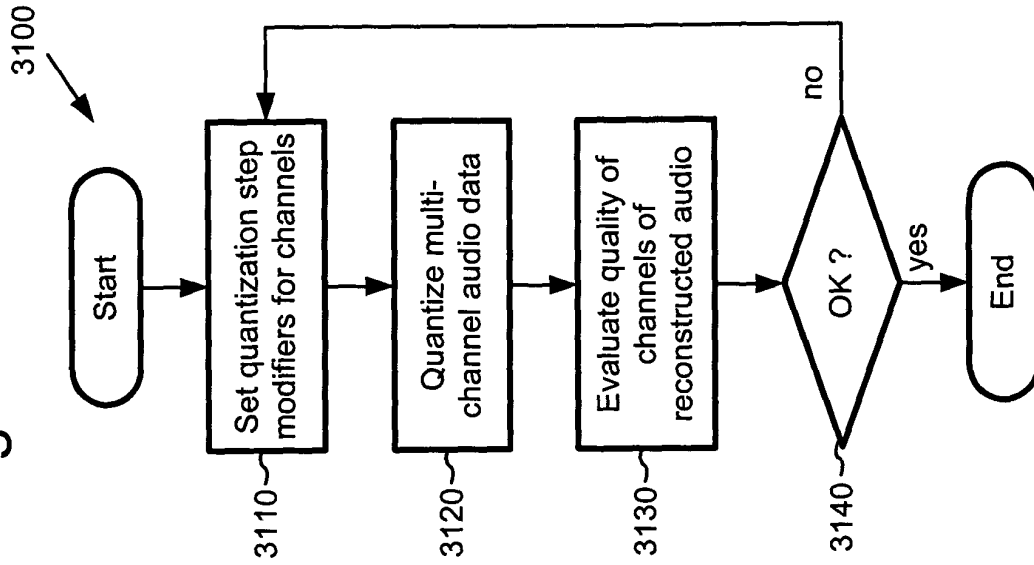




Figure 32

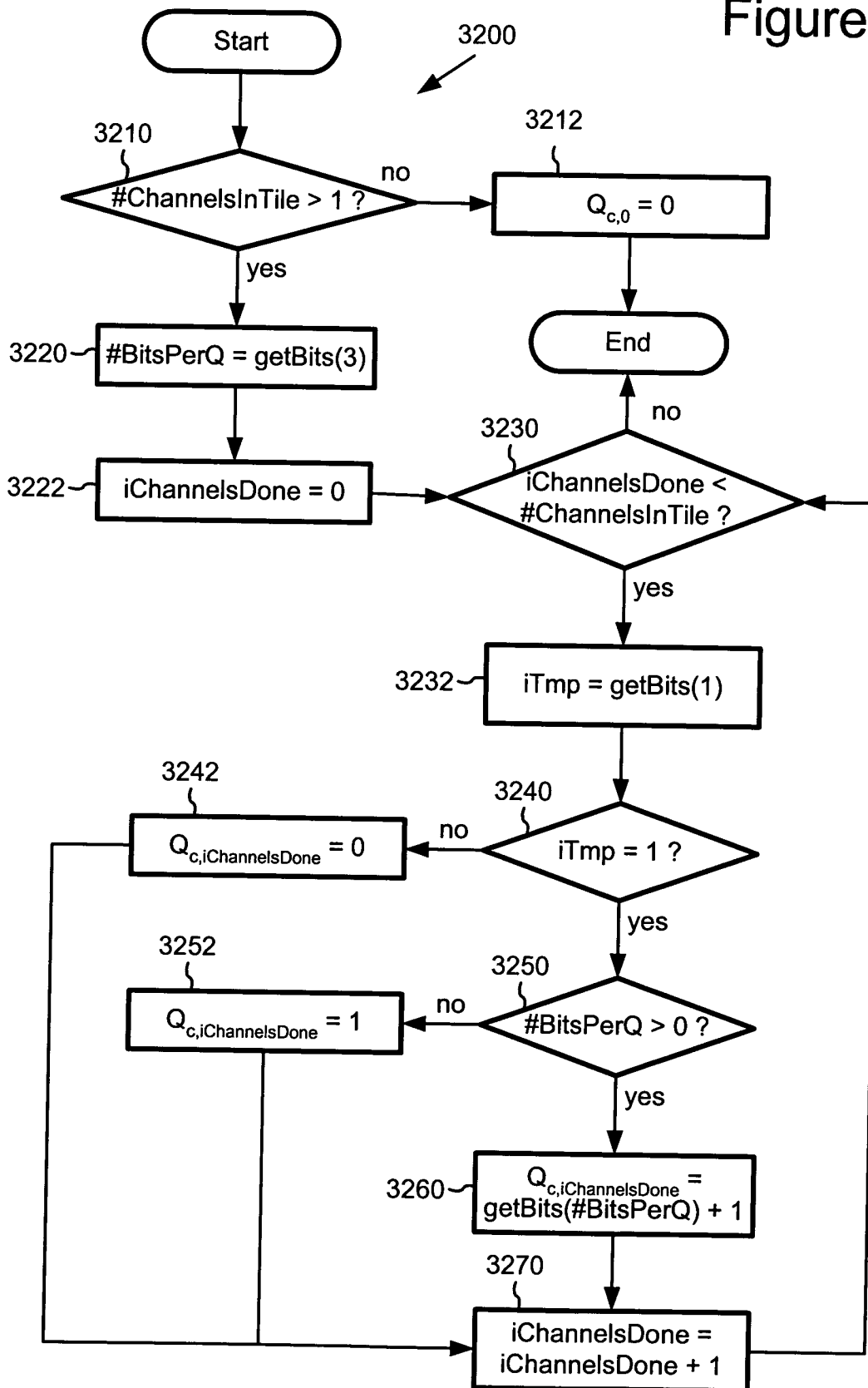


Figure 33

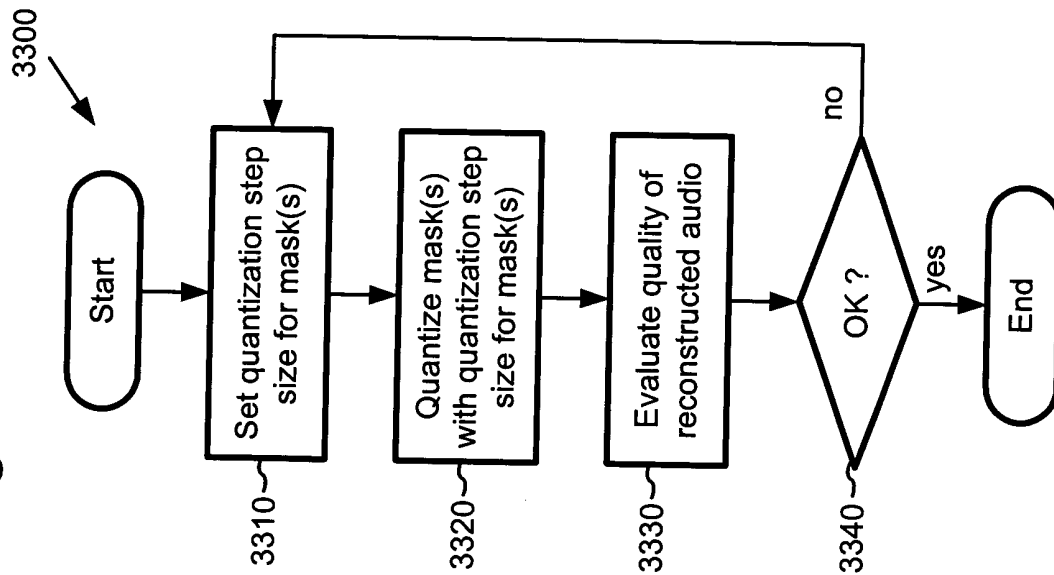


Figure 34

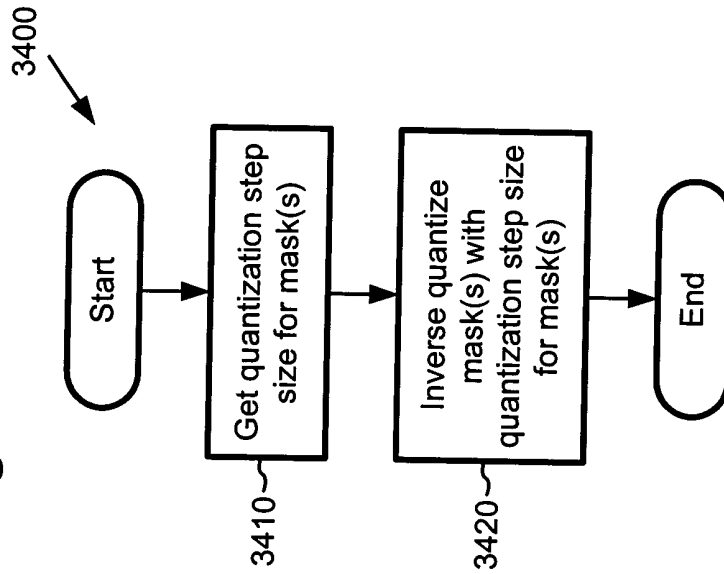


Figure 35

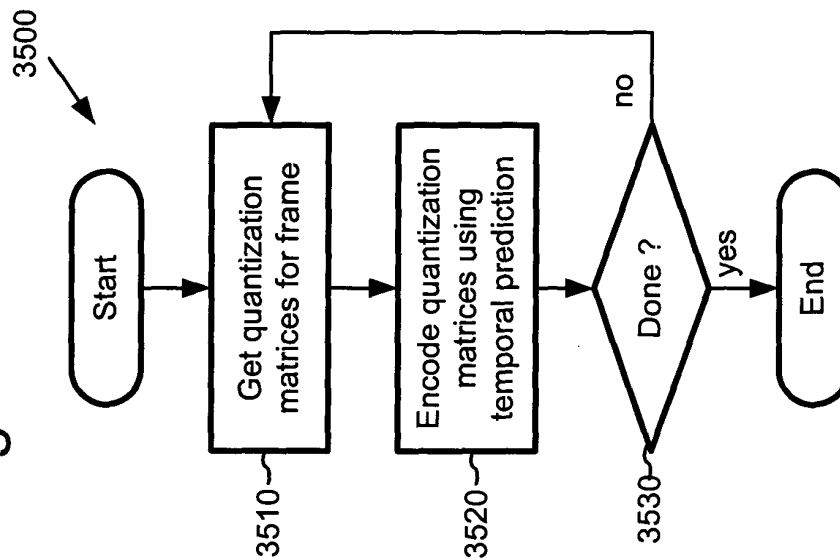


Figure 36

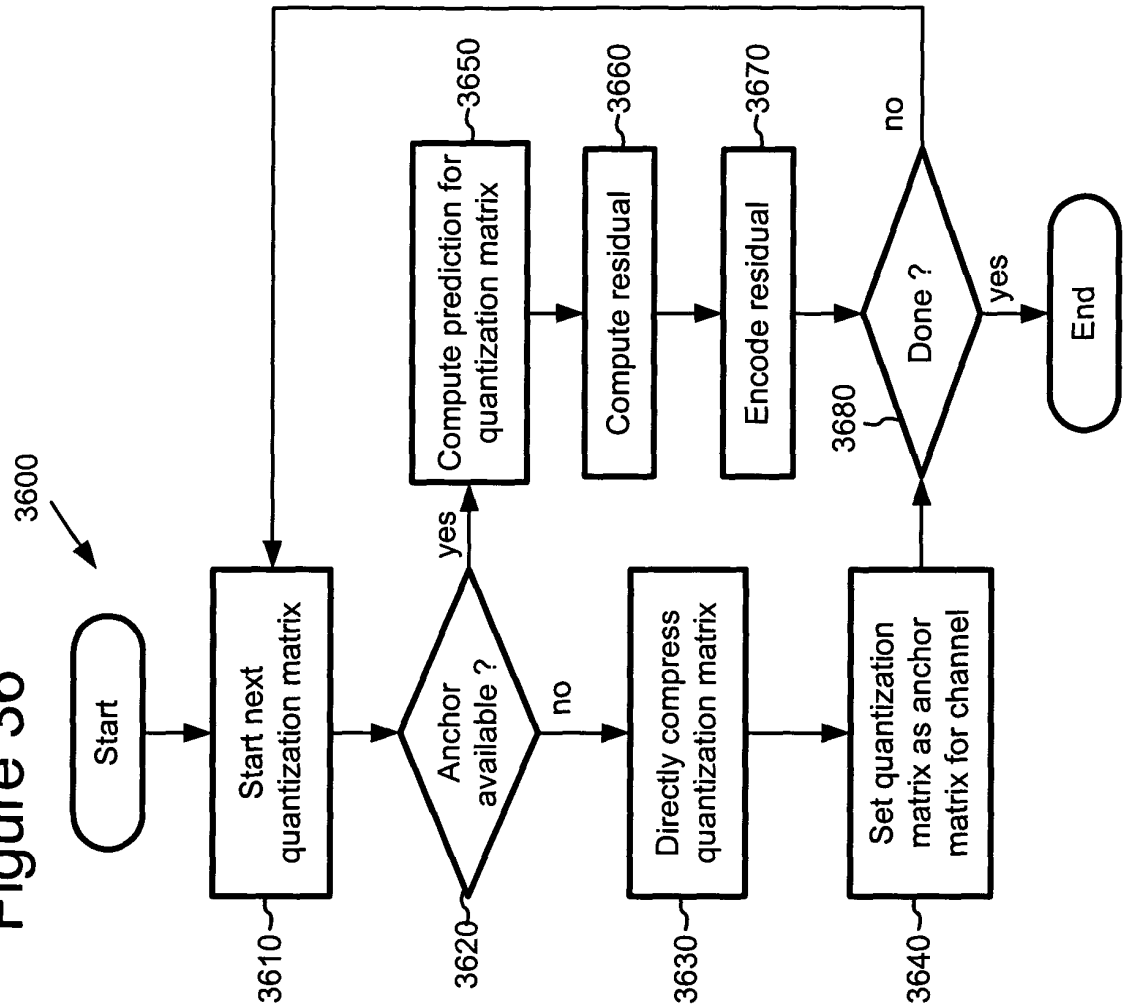


Figure 37

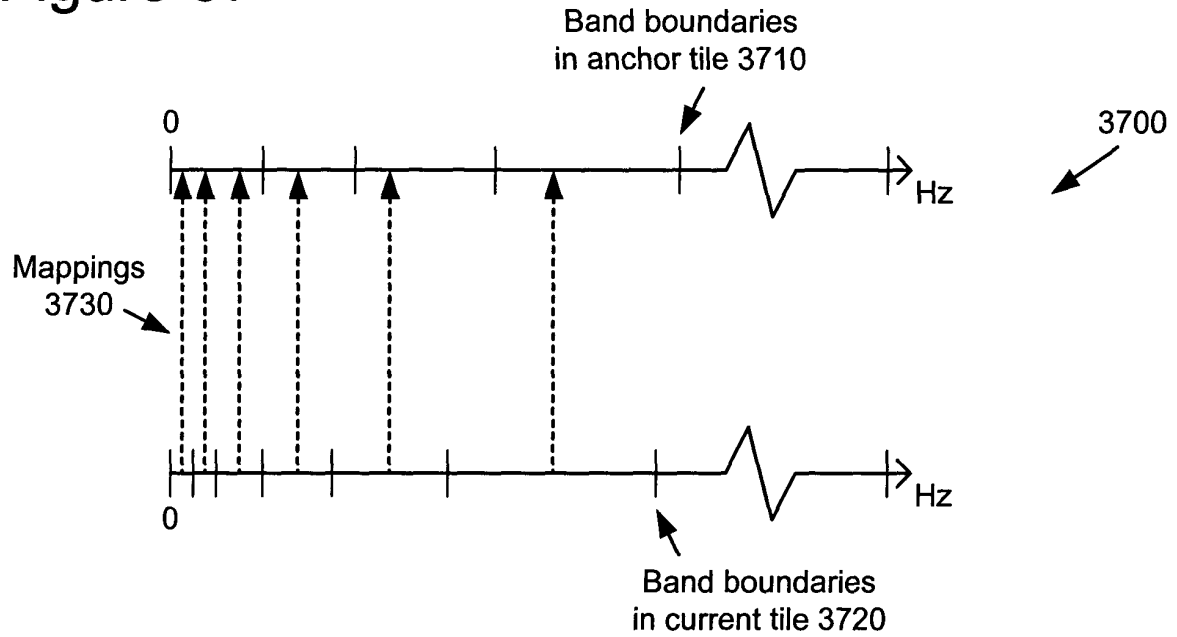


Figure 40

Post-processing transform matrix 4000

$$A_{P-Center} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0.5 & 0.5 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix}$$

Figure 38

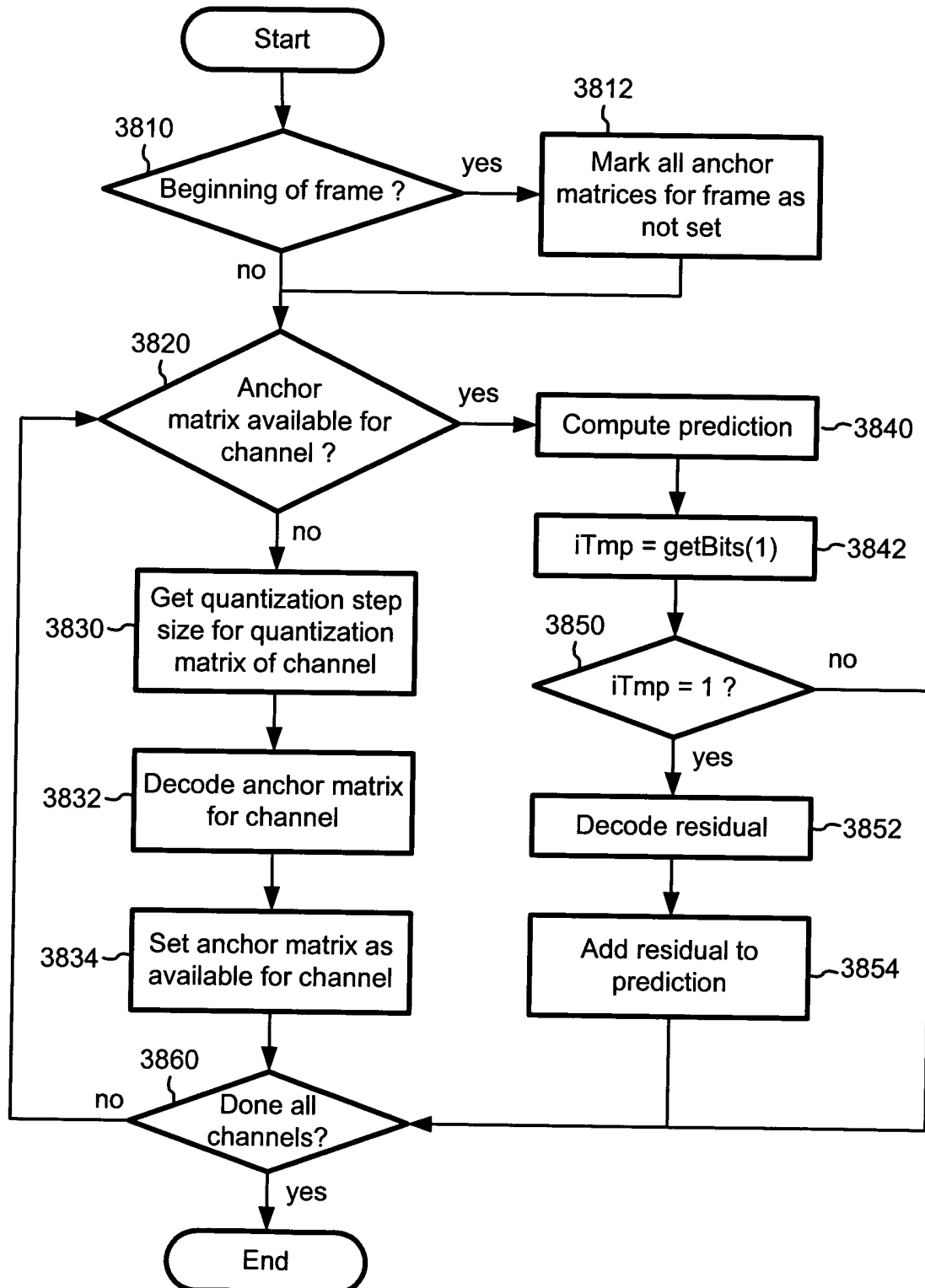


Figure 39

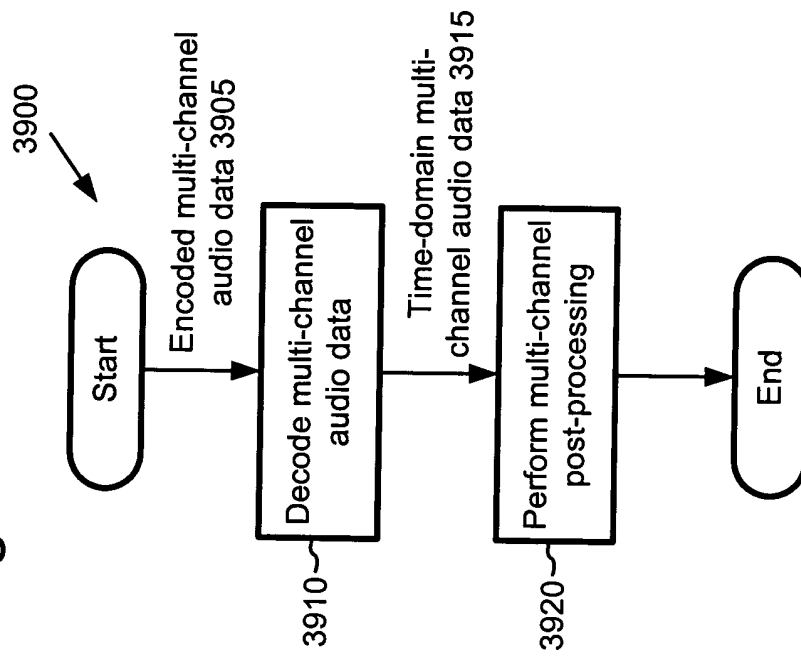


Figure 41

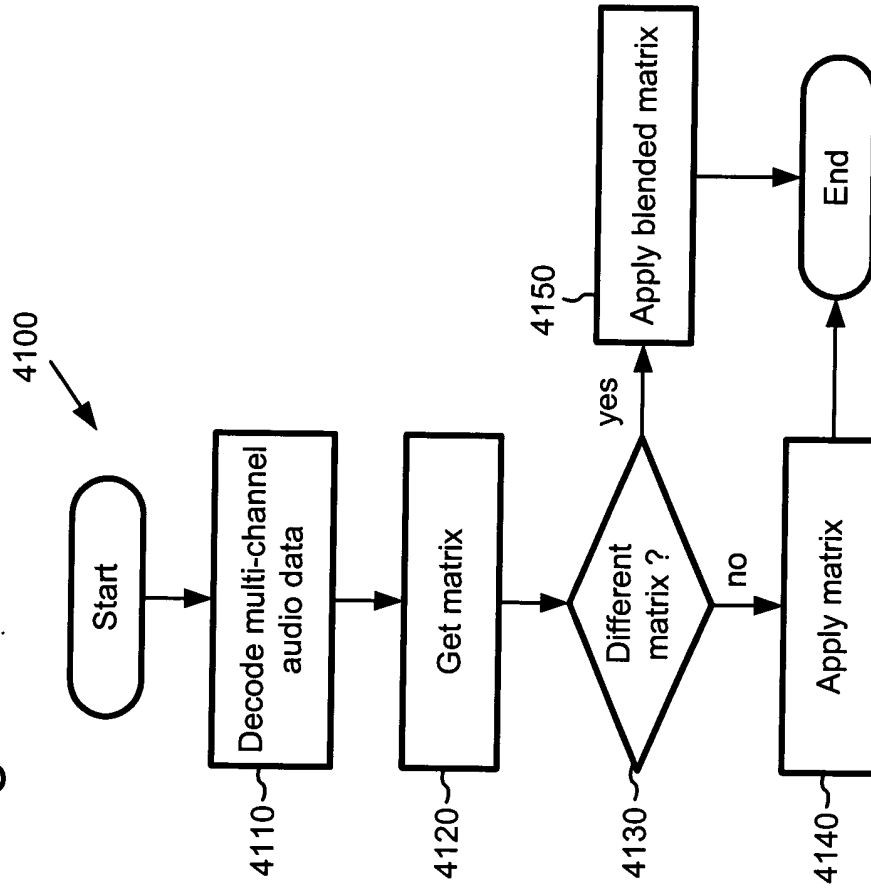


Figure 42

